Case Study

Enabling Zero Trust Networking in Cashless Devices

Background

Technological advances and changes in user preferences, as well as changes in legal and regulatory frameworks, have increasingly moved consumers and businesses towards digital payments. Smartphones and enlarged internet coverage have supported the spread of mobile money and electronic wallets. In a cashless society, consumers can make payments over the Internet, at the vending machine or point of sale from a mobile device or token using e-wallets besides other electronic payment systems such as smart cards, debit and credit cards. According to a research from PWC, cashless transactions will grow fastest in Asia-Pacific, increasing by 109% from 2020 to 2025, and then by 76% from 2025 to 2030, followed by Africa and Europe. Global cashless payment volumes are set to increase by more than 80% from 2020 to 2025, and to almost triple by 2030.

Challenge

Self-service commerce is growing at a fast pace, and within more segments bringing along substantial benefits in the reduction of operational costs by managing inventory, employees, and machine health from remote. In this scenario, advanced points of sale, telemetry, and connectivity are needed. Cashless payment systems for unattended or retails business, rely on complex technology infrastructures of hardware, software, and networking technologies to function properly that are susceptible to failures, glitches, and cyberattacks. Specifically digital payments can be vulnerable to hacking, fraud and identity theft. Any disruption in this technology infrastructure can compromise the integrity of transactions and put sensitive data at risk. The existing processes in place for verifying and protecting identity are often tied to outdated financial systems and aren't designed to support a cashless, digitised society.

Industry

Cashless Platforms and Systems

Challenge

- Digital transactions can be vulnerable to hacking, fraud, and identity theft
- Complex Infrastructure, legacy systems
- Simple, easy and secure configuration and management of remote terminals
- Uncontrolled access to cashless devices and apps
- Multi-layer networks, fast switchover, low latency and uninterrupted services
- Bandwidth-intensive applications and services

Goals

- Stronger security on the edge devices and isolation of each data stream to the datacenter
- Granular and transparent access controls
- Efficient Asset and Energy Management
- Simpler networks, legacy-compliant at lower costs
- Increased network stability and availability
- Pervasive and ubiquitous secure technology at more than just the network layer
- Seamless integration for easy setup, deployment

Solution

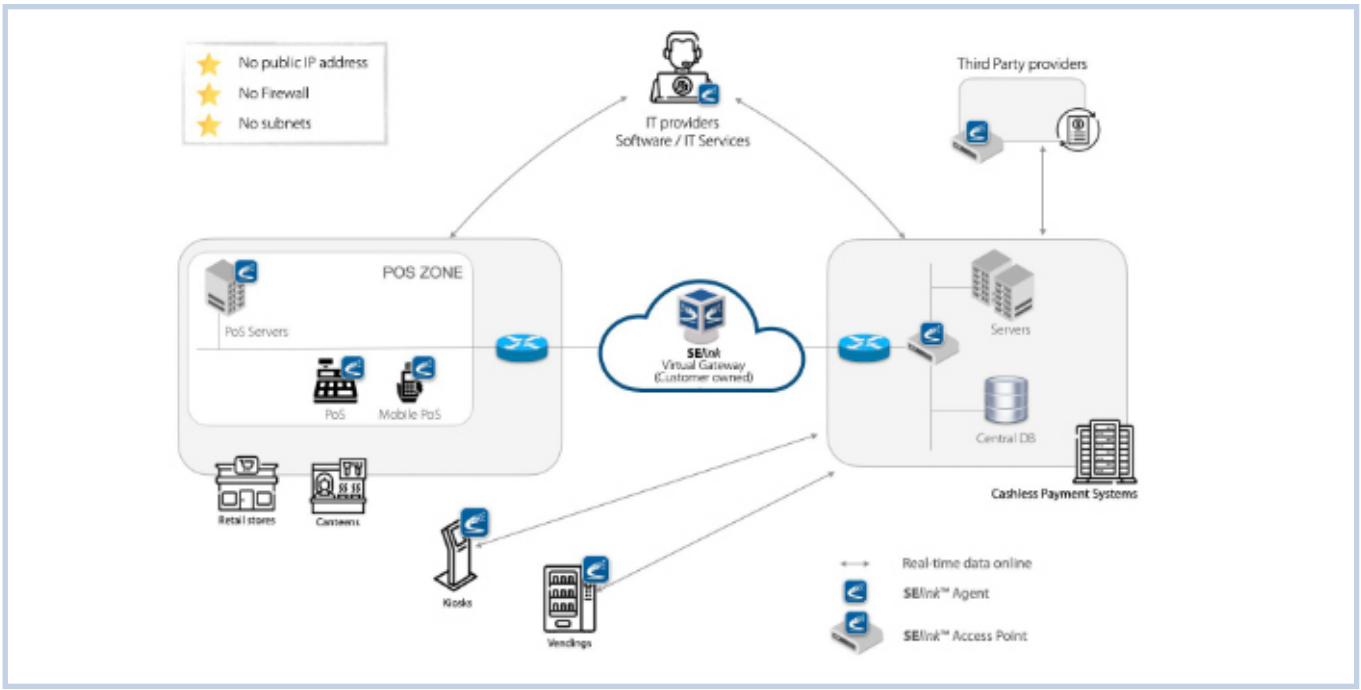
SE*link*™ provides a zero trust security model combined withs service-level software defined network segmentation, granular privileged access management. Delivering efficiency, security and control to Devices and Networks in a single solution.

Solution

SE*link*™ solves connectivity, networking and security challenges of cashless devices and networks. Introducing Virtualisation, Isolation and Security, SElink ensures a logical separation of the network domains at different levels - the network, the devices and the interactions with the Supply chain and Third Party providers (IT, Equipment, Issuers, Services). Each host and network is isolated and segregated from the data link layer, up to and including the application layer. Identification, authentication and authorisation of hosts to access services is based on least-privilege principles, increasing the overall security posture of the environment. SElink™ is more than a data diode or traditional network-based segmentation through subnets. **SE*link*™ is a Zero Trust service-oriented, secure, virtual networking solution** to replace siloed IT systems and infrastructures for simpler and efficient networks, cost savings and streamlined operations across distributed networks. **SE*link*™ provides** smart mechanisms for **network stability** and **low bandwidth requirements,** extends **protection to the edge devices, segregate services and create private networks.** It replicates heterogenous clients and server behaviours in a seamless way, as in a private LAN. The SE*link*™ Gateway acts as a broker and performs connectivity virtualisation to the endpoints. The advantages are overwhelming. SE*link*™ protects both the data channel and the access to the communication channel, which can only be used by authorised processes. This ensures that the server is protected even if the endpoint device is compromised, preventing infection propagation through the network and major service disruptions. **Implementing SE*link*™, devices no longer need public static IP addresses, resulting in a significant reduction of the attack surface, increased efficiency and substantial savings on operational costs.** Lightweight protocols and zero encryption overhead make band availability and integration of security no longer a limit. Easy integration in any environment, over any protocol, portable, multi-device for a fast deployment of new devices without requiring experts to travel to the site. SE*link*™ is ready to use the Post-Quantum algorithms shortlisted by NIST. Crypto agility allows SE*link*™ to migrate to new symmetrical algorithms in a centralised way without any effort. A centralised deployment and management security system guarantees control across a large-scale network.

Benefits

1. **Unstoppable connectivity** through anti-shaping, network stability and non-evident headers techniques
2. **Improved QoS and service availability** through low-bandwidth strategies and smart mechanisms
3. **Virtual one-way dynamic micro-segmentation links** at service level to different sites simultaneously
4. **No more costly dedicated connectivity** contracts with Private Virtual Networking
5. **Security automation, greater network visibility and control** delivered by a Unified Management Platform
6. **Empowering Zero Trust Network Access and Assumed Breach model** strategies
7. **Enhanced system longevity and resilience** to quantum attacks and **seamless encryption updates, redesign-free** through Crypto Agility



Blu5 Group
info@blu5group.com
www.blu5group.com